Pace Analytical Services, Inc.
315 Chestnut Street
Virginia, MN 55792
(218) 742-1042

November 17, 2015

Tom Moe
USS Corporation
P.O. Box 417
Mountain Iron, MN 55768

RE: Project: NPDES Tailings Basin
Pace Project No.: 1256654

Dear Tom Moe:
Enclosed are the analytical results for sample(s) received by the laboratory on November 04, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heather R Zika
heather.zika@pacelabs.com
Project Manager

Enclosures

cc: Terri Sabetti, Northeast Technical

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CERTIFICATIONS

Project: NPDES Tailings Basin
Pace Project No.: 1256654

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification #MN01084
Arizona Department of Health Certification #AZ0785
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007
Nevada DNR #MN010842015-1
Oklahoma Department of Environmental Quality

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SAMPLE SUMMARY

Project: NPDES Tailings Basin
Pace Project No.: 1256654

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1256654001	**SW002**	Water	11/04/15 09:20	11/04/15 16:50
1256654002	**WS006/WS007**	Water	11/04/15 14:45	11/04/15 16:50

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SAMPLE ANALYTE COUNT

Project: NPDES Tailings Basin
Pace Project No.: 1256654

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1256654001	**SW002**	ASTM D2327	DMB	1	PASI-V
1256654002	**WS006/WS007**	ASTM D2327	DMB	1	PASI-V

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ANALYTICAL RESULTS

Project: NPDES Tailings Basin
Pace Project No.: 1256654

Sample: SW002 **Lab ID: 1256654001** Collected: 11/04/15 09:20 Received: 11/04/15 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
ASTM D2327 Nitrogen, Amine	Analytical Method: ASTM D2327 Preparation Method: ASTM D2327								
Nitrogen, Amine	ND	mg/L	0.25	0.028	1	11/05/15 08:45	11/05/15 09:04		

Sample: WS006/WS007 **Lab ID: 1256654002** Collected: 11/04/15 14:45 Received: 11/04/15 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
ASTM D2327 Nitrogen, Amine	Analytical Method: ASTM D2327 Preparation Method: ASTM D2327								
Nitrogen, Amine	ND	mg/L	0.25	0.028	1	11/05/15 08:45	11/05/15 09:04		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NPDES Tailings Basin
Pace Project No.: 1256654

QC Batch: WETA/14555
QC Batch Method: ASTM D2327
Analysis Method: ASTM D2327
Analysis Description: ASTM D2327 Nitrogen, Amine
Associated Lab Samples: 1256654001, 1256654002

METHOD BLANK: 265407 Matrix: Water
Associated Lab Samples: 1256654001, 1256654002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Amine	mg/L	ND	0.25	0.028	11/05/15 09:03	

LABORATORY CONTROL SAMPLE: 265408

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Amine	mg/L	.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 265409 265410

Parameter	Units	1256654002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Amine	mg/L	ND	.5	.5	0.52	0.51	92	90	90-110	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NPDES Tailings Basin
Pace Project No.: 1256654

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-V Pace Analytical Services - Virginia

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES Tailings Basin
Pace Project No.: 1256654

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1256654001	**SW002**	ASTM D2327	WETA/14555	ASTM D2327	WETA/14556
1256654002	**WS006/WS007**	ASTM D2327	WETA/14555	ASTM D2327	WETA/14556

Pace Analytical®

Pace Analytical Services. Inc.
315 Chestnut Street
P.O. Box 1212
Virginia, MN 55792
218-742-1042

WO# : 1256654

PM: HRZ Due Date: 11/18/15
CLIENT: USS CORP

CHAIN OF CUSTODY RECORD
PAGE 1 OF 1
COC#

CLIENT NAME, ADDRESS, PHONE# :	INVOICE TO:	REPORT TO:	SPECIAL INSTRUCTIONS:
USS	MINNTAC	T. Moe	Ammine short hold time 24hr

PROJECT:	SAMPLER'S NAME (Print):	PERMIT REQ.:
NPDES Tailings Basin	TOM MOE	

PROFILE #: 68	BO #: 5109

LOG-IN NO:	DESCRIPTION:	SAMPLE COLLECTION DATE START DATE:	SAMPLE COLLECTION DATE END DATE:	SAMPLE COLLECTION TIME START TIME:	SAMPLE COLLECTION TIME END TIME:	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	MATRIX LIQ.	MATRIX SOL.	Filter	CONTAINERS GENERAL - NO PRES.	CONTAINERS NUTRIENTS - H2SO4	CONTAINERS METALS - HNO3	CONTAINERS 40ML VIALS -HCL	CONTAINERS 1LT AMBER - HCL	CONTAINERS 100ML - NATHIO	ANALYSIS:
001	SW002	11/4/15		0920			X	X			1						Amines
002	WS006/WS007	11/4/15		1445			x	x			1						Amines

RELINQUISHED BY:	DATE: 11/4/15 TIME: 1650	RECEIVED BY:	DATE: TIME:	RELINQUISHED TO PACE SAMPLE LOCK-UP:	DATE: TIME:
RECEIVED BY:	DATE: TIME:	RELINQUISHED BY:	DATE: TIME:	RECEIVED FROM PACE SAMPLE LOCK-UP:	DATE: TIME:
RELINQUISHED BY:	DATE: TIME:	RECEIVED BY:	DATE: TIME:	RECEIVED FOR LAB BY: GB	DATE: 11-4-15 TIME: 16:50

CUSTODY SEALS INTACT: YES NO N/A

SAMPLES RECEIVED ON ICE: YES NO SAMPLE TEMPERATURE: 1.5 °C

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Feb2015 Page 1 of 1
	Document No.: **F-VM-C-001-Rev.09**	Issuing Authority: Pace Virginia, Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: USS

Project #: WO# : 1256654

Courier: ☐Fed Ex ☐UPS ☐USPS ☒Client ☐Commercial ☐Pace ☐Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☐Yes ☒No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐Bubble Wrap ☐Bubble Bags ☐None ☒Other: Hazpak **Temp Blank?** ☒Yes ☐No

Thermometer Used: ☒ 140792808 **Type of Ice:** ☒Wet ☐Blue ☐None ☒Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.2 **Cooler Temp Corrected °C:** 1.5 **Biological Tissue Frozen?** ☐Yes ☐No ☒NA

Temp should be above freezing to 6°C Correction Factor: +0.3 **Date and Initials of Person Examining Contents:** 11/4/15 ms

Comments:

Chain of Custody Present?	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☒Yes	☐No	☐N/A	3.
Sampler Name and Signature on COC?	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time?	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72 hr)?	☒Yes	☐No	☐N/A	6. Amines
Rush Turn Around Time Requested?	☐Yes	☒No	☐N/A	7.
Sufficient Volume?	☒Yes	☐No	☐N/A	8.
Correct Containers Used?	☒Yes	☐No	☐N/A	9.
-Pace Containers Used?	☒Yes	☐No	☐N/A	
Containers Intact?	☒Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒Yes	☐No	☐N/A	12.
-Includes Date/Time/ID/Analysis Matrix: wt				
All containers needing acid/base preservation will be checked and documented in the pH logbook.	☐Yes	☐No	☒N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	☐Yes	☐No	☒N/A	13.
Headspace in VOA Vials (>6mm)?	☐Yes	☐No	☒N/A	14.
Trip Blank Present?	☐Yes	☐No	☒N/A	15.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Heather B. **Date:** 11/5/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)